NON-PUBLIC?: N
ACCESSION #: 9408240229
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Prairie Island Nuclear Generating Plant PAGE: 1 OF 3
Unit 2

DOCKET NUMBER: 050003306

TITLE: Unit 2 Turbine-Generator Trip/Reactor Trip Caused by
Failure of a West Pipe Sprinkler Head
EVENT DATE: 7/21/94 LER #: 94-002-00 REPORT DATE: 08/12/94

OTHER FACILITIES INVOLVED: Prairie Island U1 DOCKET NO: 05000282

OPERATING MODE: N POWER LEVEL: 100%

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Arne A Hunstad TELEPHONE: (612) 388-1121

COMPONENT FAILURE DESCRIPTION:
CAUSE: B SYSTEM: KP COMPONENT: SRNK MANUFACTURER: V119
REPORTABLE NPRDS: No

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On July 21, 1994, Unit 2 was at 100% power. A wet pipe sprinkler system had been recently installed at the turbine-generator to provide protection against lube oil fires. On the morning of July 21, a hydrostatic test of the fire protection piping was begun. After the system had been at test pressure for about 1 3/4 hours, a sprinkler head activating device failed and water was sprayed on the main generator bushings, establishing a current path from B phase bushing to ground. The generator ground relay actuated the 86 generator lockout relay, which caused a reactor trip at 1019 hours. The unit responded as expected to the automatic trip, including automatic start of the auxiliary feedwater pumps on low steam generator level. Leaking feedwater isolation valves contributed to an RCS cooldown, and the resulting low pressurizer level caused letdown isolation. Cause of the trip was determined; the bushing enclosure, neutral connection, isophase bus, and vertical link box were

disassembled, inspected, cleaned, and tested; and the determination was made that there was no electrical damage. The unit was returned to service at 0703 on July 22. The turbine-generator wet pipe sprinkler system on both Units 1 and 2 has been isolated until further system evaluation can be completed.

END OF ABSTRACT

EVENT DESCRIPTION

On July 21, 1994, Unit 2 was at 100% power. A wet pipe sprinkler system (EIIS System Identifier KP) had been recently installed at the turbine-generator (EIIS Component Identifier TG) to provide protection against lube oil fires. On the morning of July 21, a hydrostatic test of the fire protection piping was begun. After the system had been at test pressure for about 1 3/4 hours, a sprinkler head activating device failed and water was sprayed on the main generator bushing, establishing a current path from B phase bushing to ground. The generator ground relay actuated the 86 generator lockout relay, which caused a turbine trip and reactor trip at 1019 hours. The unit responded as expected to the automatic trip, including automatic start of the auxiliary feedwater pumps on low steam generator level. Leaking feedwater isolation valves contributed to an RCS cooldown, and the resulting low pressurizer level caused letdown isolation. Cause of the trip was determined; the bushing enclosure, neutral connection, isophase bus, and vertical link box were disassembled, inspected, cleaned, and tested; and the determination was made that there was no electrical damage. The unit was returned to service at 0703 on July 22. The turbine-generator wet pipe sprinkler system on both Units 1 and 2 has been isolated until further system evaluation can be completed.

CAUSE OF THE EVENT

Cause of the event was failure of a wet pipe sprinkler head activating device.

ANALYSIS OF THE EVENT

The event is reportable pursuant to 10CFR50.73(a)(2)(iv) since it was an unplanned reactor trip. Health and safety of the public were unaffected since the unit responded as designed to the automatic trip.

CORRECTIVE ACTION

Plant operators stabilized the unit using normal operating procedures.

Cause of the trip was determined, affected equipment was inspected and tested, the water spillage was cleaned up, the determination was made that there was no electrical damage, and the unit was returned to service.

The failed sprinkler head and riser were removed for evaluation of the failure.

The turbine-generator wet pipe sprinkler system on both Units 1 and 2 has been isolated until further system evaluation can be completed.

FAILED COMPONENT IDENTIFICATION

Viking Micromatic Sprinkler Model M

PREVIOUS SIMILAR EVENTS

There have been no previous similar events reported at Prairie Island.

NSP Northern States Power Company

Prairie Island Nuclear Generating Plant

1717 Wakonade Dr. East
Welch, Minnesota 55089

August 12, 1994 10 CFR Part 50
Section 50.73

U S Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 License Nos. DPR-42
50-306 DPR-60

Unit 2 Turbine-Generator Trip/
Reactor Trip Caused by Failure of a Wet Pipe Sprinkler Head

The Licensee Event Report for this occurrence is attached. In the report, we made no new NRC commitments.

This event was reported via the Emergency Notification System in accordance with 10 CFR Part 50, Section 50.72, on July 21, 1994. Please contact us if you require additional information related to this event.

Roger O Anderson
Director
Licensing and Management Issues

c: Regional Administrator - Region III, NRC
NRR Project Manager, NRC
Senior Resident Inspector, NRC
Kris Sanda, State of Minnesota

Attachment

*** END OF DOCUMENT ***